National Institute of Environmental Health Sciences

The effect of climate change on the occurrence and prevalence of livestock diseases in Great Britain: A review

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Abstract:

There is strong evidence to suggest that climate change has, and will continue to affect the occurrence, distribution and prevalence of livestock diseases in Great Britain (GB). This paper reviews how climate change could affect livestock diseases in GB. Factors influenced by climate change and that could affect livestock diseases include the molecular biology of the pathogen itself; vectors (if any); farming practice and land use; zoological and environmental factors; and the establishment of new microenvironments and microclimates. The interaction of these factors is an important consideration in forecasting how livestock diseases may be affected. Risk assessments should focus on looking for combinations of factors that may be directly affected by climate change, or that may be indirectly affected through changes in human activity, such as land use (e.g. deforestation), transport and movement of animals, intensity of livestock farming and habitat change. A risk assessment framework is proposed, based on modules that accommodate these factors. This framework could be used to screen for the emergence of unexpected disease events.

Source: http://dx.doi.org/10.1111/j.1365-2672.2008.04036.x

Resource Description

Exposure :

weather or climate related pathway by which climate change affects health

Ecosystem Changes, Food/Water Security, Temperature

Food/Water Security: Livestock Productivity, Other Food Security Issue

Food Security (other): Livestock diseases

Geographic Feature:

resource focuses on specific type of geography

None or Unspecified

Geographic Location:

resource focuses on specific location

Non-United States

Non-United States: Europe

European Region/Country: European Country

Other European Country : Great Britain

Health Impact: ☑

specification of health effect or disease related to climate change exposure

Infectious Disease

Infectious Disease: Vectorborne Disease, Zoonotic Disease

Vectorborne Disease: Tick-borne Disease

Tick-borne Disease: General Tick-borne Disease

Zoonotic Disease: General Zoonotic Disease

Mitigation/Adaptation: ☑

mitigation or adaptation strategy is a focus of resource

Adaptation

Resource Type: ☑

format or standard characteristic of resource

Review

Timescale: ☑

time period studied

Time Scale Unspecified

Vulnerability/Impact Assessment: ☑

resource focus on process of identifying, quantifying, and prioritizing vulnerabilities in a system

A focus of content